

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims

1. (Original) A method for open surgical endarterectomy; comprising the steps of:
providing an elongate member having a proximal end, a distal end, and an expandable filter at the distal end;
inserting the distal end of the elongate member into the internal carotid artery downstream of a lesion;
expanding the filter;
advancing a tubular member having proximal and distal ends over the elongate member to place the distal end of the tubular member within the internal carotid artery;
inserting the proximal end of the tubular member into the common carotid artery upstream of the lesion; and
flowing blood from the common carotid artery through a lumen of the tubular member into the internal carotid artery.
2. (Original) The method of claim 1, wherein the elongate member comprises a wire.
3. (Original) The method of claim 1, wherein the filter is fixedly mounted on the elongate member.
4. (Original) The method of claim 1, wherein the filter is slideably mounted on the elongate member.

5. (Original) The method of claim 1, wherein the elongate member further comprises a sheath covering the filter, and wherein the method further comprises the step of withdrawing the sheath to release the filter.
6. (Original) The method of claim 1, wherein the filter comprises a plurality of flexible struts, each strut bonded to the elongate member at a proximal end, and each strut having a distal end slideably mounted on the elongate member.
7. (Original) The method of claim 1, further comprising the steps of occluding the common carotid artery upstream of the lesion and occluding the internal carotid artery downstream of the lesion.
8. (Original) The method of claim 7, wherein the common carotid artery and internal carotid artery are occluded by clamping.
9. (Original) The method of claim 1, further comprising the step of back-bleeding the tubular member to purge air.
10. (Original) The method of claim 7, further comprising the step of making an arteriotomy to access the lesion.
11. (Original) The method of claim 10, further comprising the step of removing the lesion by endarterectomy.
12. (Original) The method of claim 10, further comprising the step of suturing to close the arteriotomy.
13. (Original) The method of claim 12, further comprising the steps of removing occlusion from the common carotid and internal carotid arteries.
14. (Original) The method of claim 12, further comprising the step of removing the proximal and distal ends of the tubular member while maintaining the filter in the internal carotid artery.

15. (Original) The method of claim 12, further comprising the steps of collapsing and removing the filter.

16. (Original) The method of claim 5, further comprising the steps of advancing the sheath distally over the elongate member to cover the filter, and removing the elongate member and sheath from the internal carotid artery.

17. (Original) The method of claim 10, further comprising the step of flushing the lesion with saline.

18. (Original) The method of claim 7, further comprising the step of occluding the external carotid artery.

19. (Original) The method of claim 1, further comprising the step of making an incision on the internal carotid artery.

20. (Original) The method of claim 10, further comprising the step of applying a patch graft to close the arteriotomy.

21. (Original) The method of claim 12, further comprising the step of removing the filter while maintaining the tubular member in the internal carotid artery.

22. (Original) The method of claim 1, wherein the tubular member has a port between the proximal and distal ends, and wherein the elongate member is passed through the port as the tubular member is advanced over the elongate member.

23. (Original) The method of claim 22, wherein the port includes a hemostatic valve.

24. (Original) The method of claim 18, further comprising the step of measuring the blood pressure in the internal carotid artery before occluding the common and the external carotid arteries.

25. (Original) A method for open surgical endarterectomy, comprising the steps of:

- providing an elongate member having a proximal end, a distal end, and an expandable filter at the distal end;
- inserting the distal end of the elongate member into the internal carotid artery downstream of a lesion;
- expanding the filter;
- advancing a first tubular member having proximal and distal ends over the elongate member to place the distal end of the first tubular member within the internal carotid artery;
- inserting a proximal end of a second tubular member into the common carotid artery upstream of the lesion;
- joining the distal end of the second tubular member to the proximal end of the first tubular member; and
- flowing blood from the common carotid artery through a lumen of the tubular member into the internal carotid artery.

26-47. (Canceled)

48. (Original) A method for open surgical endarterectomy, comprising the steps of:

providing an elongate member having a proximal end, a distal end, an expandable filter at the distal end, and a slideable sheath covering the filter;

making an incision on the internal carotid artery downstream of a lesion;

inserting the distal end of the elongate member through the incision;

withdrawing the sheath from the filter;

expanding the filter downstream of the lesion;

occluding the external carotid artery, common carotid artery, and internal carotid artery to isolate a region of the internal carotid artery with the lesion;

performing endarterectomy to remove the lesion; and

removing occlusion from the external carotid artery, common carotid artery, and internal carotid artery, wherein embolic material is captured by the filter.

49-60. (Canceled)

61. (Original) A medical device for open surgical endarterectomy, comprising:

a first tubular member having a proximal end, a distal end, and a lumen therebetween communicating with a distal port, a first proximal port, and a second proximal port;

a hemostatic valve mounted in the second proximal port;

a second tubular member having a proximal end, a distal end, and a lumen therebetween, the distal end of the second tubular member adapted for releasable attachment to the first proximal port of the first tubular member; and

an elongate member inserted through the hemostatic valve and the second proximal port, the elongate member having a proximal end, a distal end, and an expandable filter at the distal end.

62-76. (Canceled)

77. (Withdrawn) A shunt, comprising:
an elongate tubular member having a proximal end, a distal end, and a lumen
therebetween;
an expandable filter mounted on the distal end of the shunt; and
a sheath slideably disposed about the distal end of the elongate tubular member and
covering the filter,
wherein the sheath is retractable to release the filter.

78-85. (Canceled)

86. (Previously Added) A method for open surgical endarterectomy, comprising the steps of:

providing an elongate member having a proximal end, a distal end, and an expandable filter at the distal end;

positioning the filter downstream of a lesion within an internal carotid artery;

expanding the filter;

inserting a distal end of a tubular member into the internal carotid artery;

inserting a proximal end of the tubular member into a common carotid artery upstream of the lesion;

positioning an occlusion member upstream of the lesion in the common carotid artery or downstream of the lesion in the internal carotid artery;

expanding the occlusion member to stop blood flow through the lesion; and

flowing blood from the common carotid artery through a lumen of the tubular member into the internal carotid artery downstream of the occlusion member.

87. (Previously Added) The method of claim 86, wherein the distal end of the elongate member is inserted into the common carotid artery upstream of the lesion and is advanced to a position downstream of the lesion.

88. (Previously Added) The method of claim 86, wherein the distal end of the elongate member is inserted into the internal carotid artery downstream of the lesion.

89. (Previously Added) The method of claim 86, wherein the occlusion member is a balloon.

90. (Previously Added) The method of claim 86, wherein the lumen of the tubular member passes outside of the portion of the vessel having the lesion.

91. (Previously Added) The method of claim 86, wherein the distal end of the tubular member is inserted downstream of the filter.

92. (Previously Added) The method of claim 86, wherein the distal end of the tubular member is inserted upstream of the filter.

93. (Previously Added) The method of claim 86, wherein the occlusion member is positioned downstream of the filter.

94. (Previously Added) The method of claim 86, wherein the occlusion member is positioned upstream of the filter.

95. (Previously Added) A method for open surgical endarterectomy, comprising the steps of:

providing an elongate tubular member having a proximal end, a distal end, a lumen therebetween, and an expandable filter at the distal end;

positioning the distal end of the elongate tubular member downstream of a lesion within an internal carotid artery;

expanding the filter;

inserting the proximal end of the elongate tubular member into a common carotid artery upstream of the lesion;

positioning an occlusion member upstream of the lesion in the common carotid artery or downstream of the lesion in the internal carotid artery;

expanding the occlusion member to stop blood flow through the lesion; and

flowing blood from the common carotid artery through a lumen of the elongate tubular member into the internal carotid artery downstream of the occlusion member.

96. (Previously Added) The method of claim 95, wherein the occlusion member is a balloon.

97. (Previously Added) The method of claim 95, wherein the occlusion member is attached to the distal end of the elongate tubular member.

98. (Previously Added) The method of claim 95, wherein the elongate tubular member further comprises a generally cylindrical sheath covering the filter when closed, and wherein the method further comprises the step of retracting the sheath to release the filter.
